



Practitioner's Docket No. 01-2267

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent application

of _____
Inventor(s)

for _____
Title of invention

OR

In re application of: B. G. Kania, et al.

Application No.: 0 10/ 027,394

Group Art Unit: Unknown

Filed: 12/21/2001

Examiner: Unknown

For: Treatment Devices Providing Antimicrobial Action

Assistant Commissioner for Patents
Washington, D.C. 20231

**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT
WITHIN THREE MONTHS OF FILING OR
BEFORE MAILING OF FIRST OFFICE ACTION (37 C.F.R. § 1.97(b))**

NOTE: "An information disclosure statement shall be considered by the Office if filed by the applicant: (1) within three months of the filing date of a national application; (2) within three months of the date of entry of the national stage as set forth in § 1.491 in an international application; or (3) before the mailing date of a first Office action on the merits, whichever event occurs last." 37 C.F.R. § 1.97(b).

CERTIFICATE OF MAILING/TRANSMISSION (37 C.F.R. § 1.8(a))

I hereby certify that this correspondence is, on the date shown below, being:

MAILING

☒ deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

Date: 02/16/02

FACSIMILE

☐ transmitted by facsimile to the Patent and Trademark Office.

Signature

Maria Reichmanis

(type or print name of person certifying)

(Transmittal of Information Disclosure Statement Within Three Months of Filing or Before Mailing of First Office Action [6-3]—page 1 of 2)

NOTE: The "filing date of a national application" under 37 C.F.R. § 1.97(b) has two possible meanings. Where the filing is a direct one to the United States Patent & Trademark Office, the filing is defined in 37 C.F.R. § 1.53(b) as "the date on which: (1) A specification containing a description pursuant to § 1.71 and at least one claim pursuant to § 1.75; and (2) any drawing required by § 1.81(a), are filed in the Patent and Trademark Office in the name of the actual inventor or inventors as required by § 1.41." 37 C.F.R. § 1.97(b)(1). On the other hand, an international application that enters the national stage occurs when the applicant has filed the documents and fees required by 35 U.S.C. § 371(c) within the periods set forth in § 1.494 or § 1.495. 35 U.S.C. § 371(c) requires the filing of the following: (1) the basic national fee; (2) a copy of the international application, unless already sent by the International Bureau, and optionally an English translation if filed in another language; and, also optionally (3) amendments under PCT Article 19, with a translation into English if made in another language; (4) an oath or declaration; and (5) a translation into English of any annexes to the international preliminary examination report, if such annexes were made in another language. The optional items must be submitted later, with surcharges. 37 C.F.R. § 1.97(b)(2).

IDENTIFICATION OF TIME OF FILING THE ACCOMPANYING INFORMATION DISCLOSURE STATEMENT

The information disclosure statement submitted herewith is being filed within three months of the filing date of the application or date of entry into the national stage of an international application or before the mailing date of a first Office action on the merits, whichever event occurs last. 37 C.F.R. § 1.97(b).

NOTE: "No certification or fee is due when the filing is made within the above time period. It is advisable to ensure that no Office action has been mailed if the disclosure statement is delayed until after three months from filing."

NOTE: "An information disclosure statement will be considered to have been filed on the day it was received in the Office, or on an earlier date of a mailing if accompanied by a properly executed certificate of mailing under 37 C.F.R. 1.8, or Express Mail certificate under 37 C.F.R. 1.10. An Office action is mailed on the date indicated in the Office action." Notice of April 20, 1992 (1138 O.G. 37-41, 39).

NOTE: "The term 'national application' includes continuing applications (continuations, divisions, continuations-in-part) so three-months will be measured from the actual filing date of an application as opposed [sic] to the effective date of a continuing application." Notice of April 20, 1992 (1138 O.G. 37-41, 39).

NOTE: "An action on the merits means an action which treats the patentability of the claims in an application, as opposed to only formal or procedural requirements. An action on the merits would, for example, contain a rejection or indication of allowability of a claim or claims rather than just a restriction requirements (37 C.F.R. 1.142) or just a requirement for additional fees to have a claim considered (37 C.F.R. 1.16(d)). Thus, if an application was filed on Jan. 1 and the first Office action on the merits was not mailed until six months later on July 1, the examiner would be required to consider any proper information disclosure statement filed prior to July 1." Notice of April 20, 1992 (1138 O.G. 37-41, 39).

WARNING: "A petition for suspension of action to allow applicant time to submit an information disclosure statement will be denied as failing to present good and sufficient reasons, since 37 C.F.R. § 1.97 provides adequate recourse for the timely submission of prior art for consideration by the examiner." Notice of July 6, 1992 (1141 O.G. 63).


SIGNATURE OF PRACTITIONER

Maria Reichmanis

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Practitioner's Docket No. 01-2267

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent application

of _____
Inventor(s)

for _____
Title of invention

the specification of which is being transmitted herewith

OR

In re application of: B. G. Kania, et al.

Application No.: 0 10 / 027,394 Group No.: Unknown

Filed: 12/21/2001 Examiner: Unknown

For: Treatment Devices Providing Targeted Antimicrobial Action

Assistant Commissioner for Patents
Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

CERTIFICATION UNDER 37 C.F.R. §§ 1.8(a) and 1.10*
(When using *Express Mail*, the *Express Mail* label number is **mandatory**;
Express Mail certification is optional.)

I hereby certify that, on the date shown below, this correspondence is being:

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37 C.F.R. § 1.8(a)

37 C.F.R. § 1.10*

☐ with sufficient postage as first class mail.

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Signature

Maria Reichmanis

(type or print name of person certifying)

Date: 02/06/02

***WARNING:** Each paper or fee filed by *Express Mail* **must** have the number of the "Express Mail" mailing label placed thereon prior to mailing. 37 C.F.R. § 1.10(b).

"Since the filing of correspondence under § 1.10 without the *Express Mail* mailing label thereon is an oversight that can be avoided by the exercise of reasonable care, requests for waiver of this requirement will **not** be granted on petition." Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at 56,442.

(Information Disclosure Statement [6-1]—page 1 of 19)

NOTE: "An information disclosure statement shall be considered by the Office if filed by the applicant:

- (1) Within three months of the filing date of a national application;
- (2) Within three months of the date of entry of the national stage as set forth in § 1.491 in an international application; or
- (3) Before the mailing date of a first Office action on the merits, whichever event occurs last."

37 C.F.R. § 1.97(b).

NOTE: "Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section." 37 C.F.R. § 1.56(a).

"Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

- (1) each inventor named in the application;
- (2) each attorney or agent who prepares or prosecutes the application; and
- (3) every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application." 37 C.F.R. § 1.56(c).

NOTE: The "duty as described in § 1.56 will be met so long as the information in question was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98 before issuance of the patent." Notice of January 9, 1992, 1135 O.G. 13 -25 at 17.

WARNING: "No information disclosure statement may be filed in a provisional application." 37 C.F.R. § 1.51(b).

List of Sections Forming Part of This Information Disclosure Statement

The following sections are being submitted for this Information Disclosure Statement:

*(check sections forming a part of this statement: discard unused sections
and number pages consecutively)*

1. ☒ Preliminary Statements
2. ☒ FORMS PTO/SB/08A and 08B (formerly FORM PTO-1449)
3. ☐ Statement as to Information Not Found in Patents or Publications
4. ☐ Identification of Prior Application in Which Listed Information Was Already Cited and for Which No Copies Are Submitted or Need Be Submitted
5. ☐ Cumulative Patents or Publications
6. ☒ Copies of Listed Information Items Accompanying This Statement
7. ☐ Concise Explanation of Non-English Language Listed Information Items
 - 7A. ☐ EPO Search Report
 - 7B. ☐ English Language Version of EPO Search Report
8. ☐ Translation(s) of Non-English Language Documents
9. ☒ Concise Explanation of English Language Listed Information Items (Optional)
10. ☒ Identification of Person(s) Making This Information Disclosure Statement

(complete the following, if appropriate)

Sections _____, respectively, have been continued on ADDED PAGE(S).

NOTE: "Once the minimum requirements are met, the examiner has an obligation to consider the information." Notice of April 20, 1992 (1138 O.G. 37-41, 37).

Section 1. Preliminary statements

Applicants submit herewith patents, publications or other information, of which they are aware that they believe may be material to the examination of this application, and in respect of which, there may be a duty to disclose.

The filing of this information disclosure statement shall not be construed as a representation that a search has been made (37 C.F.R. 1.97(g)), an admission that the information cited is, or is considered to be, material to patentability, or that no other material information exists.

The filing of this information disclosure statement shall not be construed as an admission against interest in any manner. Notice of January 9, 1992, 1135 O.G. 13-25, at 25.

Section 2. Forms PTO/SB/08A and 08B (formerly Form PTO-1449)

NOTE: With respect to the list required by paragraph (b) of 37 C.F.R. 1.98, the Notice of April 20, 1992 (1138 O.G. 37-41) points out that:

"The list may not be incorporated into the specification but must be submitted in a separate paper. A separate list is required so that it is easy to confirm that applicant intends to submit an information disclosure statement, and because it provides a readily available checklist for the examiner to indicate which identified documents have been considered. A copy of a separate list will also provide a simple means of communication to applicant to indicate the listed documents that have been considered and those listed documents that have not been considered. Use of form PTO-1449, "Information Disclosure Citation, is encouraged."

NOTE: *"An information disclosure statement may include two list[s] (and two certifications)] . . . in situations where some of the information listed was cited in a communication from a foreign patent office not more than three months prior to filing the statement and some was not, but was not known more than three months prior to filing the statement."* Notice of April 20, 1992 (1138 O.G. 37-41, 40).

NOTE: With respect to the examiner's consideration of the Information Disclosure Statement, the Notice of April 20, 1992 (1138 O.G. 37-41) states:

*"If information is listed in the specification rather than in a separate paper, or if the other content requirements *** are not complied with, the examiner will notify applicant in the next Office action that the information has not been considered. It should be noted, however, that no copy of a U.S. patent application is required to be submitted. *** Where a U.S. patent application is properly cited, the examiner should obtain access to that file within the Office.*

"Examiners must consider all citations submitted in conformance with the rules and this section and place their initials adjacent [sic] the citations on a list or in the boxes provided on a form PTO-1449. If the citations are submitted on a list other than a form PTO-1449, the examiner may write "all considered" and his or her initials to indicate that all citations have been considered. If any of the citations are considered, a copy of the submitted list or form, as reviewed by the examiner, will be returned to the applicant with the next communication. The original copy of the form will be entered into the application file. The copy returned to applicant will serve both as acknowledgement of receipt of the information disclosure statement and as an indication that the references were considered by the examiner. Forms PTO-326 and PTOL-37 include a box to indicate the attachment of form PTO-1449.

*"Information which complies with requirements as discussed in this section but which is in a non-English language will be considered in view of the concise explanation submitted *** and insofar as it is understood on its face, e.g., drawings, chemical formulas, in the same manner that non-English language information in Office search files is considered by examiners in conducting searches. The examiner need not have the information translated unless it appears to be necessary to do so. *** The examiner should not require that a translation be filed by applicant. The examiner should not make any comment such as that the non-English language information has only been considered to the extent understood, since this fact is inherent.*

"Since information is required to be listed in a separate paper rather than in the specification, there is no need to mark "All checked" or "Checked" in the margin of a specification containing citations.

"If a statement fails to comply with the requirements as discussed in this section for an item of information, a line should be drawn through the citation to show that it has not been considered. The other items of information listed that do comply with the rules and this section will be considered by the examiner and will be appropriately initialed.

* * * * *

"A citation listed on form PTO-1449 and considered by the examiner in accordance with this section will be printed on the patent. A citation listed in a separate paper, equivalent to but not on form PTO-1449, and considered by the examiner in accordance with this section will be printed on the patent if the list is on a separate sheet which is clearly identified as an information disclosure statement and the list lends itself to easy capture of the necessary information by the Office printing contractor, i.e., each item of information is listed on a single line, the lines are at least double-spaced from each other, the information is uniform in format for each listed item, the list includes a column for the examiner's initials to indicate that the information was considered. If a citation is not printed on the patent but has been considered by the examiner in accordance with this section, the patented file will reflect that fact . . . "

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Please type a plus sign (+) inside this box →

1442A/PTO
Rev. 10/95

**U.S. Department of Commerce
Patent and Trademark Office**

LIST OF PRIOR ART CITED BY APPLICANT

(use as many sheets as necessary)

Sheet 3 of 4

Complete If Known

Application Number	10/027,394
Filing Date	12/21/2001
First Named Inventor	B. G. Kania, et al.
Group Art Unit	Unknown
Examiner Name	Unknown
Attorney Docket Number	01-2267

U.S. PATENT DOCUMENTS

[illegible]

FOREIGN PATENT DOCUMENTS

[illegible]

**Examiner
Signature**

Date Considered

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.1⁶ if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take .2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.**



Please type plus sign (+) inside this box → ☐

PTO/SB/08B (6-95)
Approved for use through 07/31/96, OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

1449B/PTO Rev. 10/95		U.S. Department of Commerce Patent and Trademark Office		Complete if Known	
LIST OF PRIOR ART CITED BY APPLICANT <i>(use as many sheets as necessary)</i>				Application Number	10/027,394
				Filing Date	12/21/2001
				First Named Inventor	B. G. Kania, et al.
				Group Art Unit	Unknown
				Examiner Name	Unknown
				Attorney Docket Number	01-2267
Sheet	4	of	4		

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.†	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, country, where published, source.	T?
		SPADARO, J. A., et al., "Antibacterial Effects of Silver Electrodes with Weak Direct Current," <u>Antimicrobial Agents & Chemotherap.</u> , Vol. 6, No. 5 (1974), pp. 637-642.	
		BERGER, T. J., et al., "Antifungal Properties of Electrically-Generated Metallic Ions," <u>Antimicrobial Agents & Chemotherapy</u> , Vol. 20, No. 5 (1976), pp. 856-860.	
		BECKER, R. O., et al., "Treatment of Orthopaedic Infections With Electrically-Generated Silver Ions" <u>J. Bone & Joint Surgery</u> , Vol. 60-A, No. 7 (1978), pp. 871-881.	

Examiner Signature		Date Considered	
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Unique citation designation number. 2 Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take .2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Section 6. Copies of Listed Information Items Accompanying This Statement

NOTE: 37 C.F.R. 1.98(a)(2) requires that any information disclosure statement filed under § 1.97 shall include: "A legible copy of: (1) Each U.S. and foreign patent; (ii) Each publication or that portion which caused it to be listed; and (iii) All other information or that portion which caused it to be listed, except that no copy of a U.S. patent application need be included . . ."

NOTE: The wording in § 1.98(a)(2)(iii) makes it clear that the requirement to submit a copy of each item of information listed in an information disclosure statement does not apply to the citation of a U.S. patent application. Notice of January 9, 1992, 1135 O.G. 13-25, at 14.

Legible copies of all items listed in Forms PTO/SB/08A and 08B (formerly Form PTO-1449) accompany this information statement.

(complete the following, if applicable)

- ☐ Exception(s) to above:
 - ☐ Items in prior application, from which an earlier filing date is claimed for this application, as identified in Section 4.
 - ☐ Cumulative patents or publications identified in Section 5.

Section 9. Concise Explanation of English Language Listed Information Items (OPTIONAL)

NOTE: "Applicants may, if they wish, provide a concise explanation of why English-language information is being submitted and how it is understood to be relevant. Concise explanations are helpful to the Office, particularly where documents are lengthy and complex and applicant is aware of a section that is highly relevant to patentability or where a large number of documents are submitted and applicant is aware that one or more are highly relevant to patentability." Notice of April 20, 1992 (1138 O.G. 37-41, 38).

The following patents are believed to be relevant to the subject application:

1. U.S. No. 6,087,549 issued July 11, 2000 to Flick for a Multilayer Laminate Wound Dressing. Flick discloses a dressing comprising a plurality of layers of preferably silver or silver-coated fibers in a woven fabric alternating with layers of nonconductive, preferably nonmetallic fabric. Each layer preferably contains a different ratio of metalized to nonmetalized fibers.

2. U.S. No. 6,017,553 issued January 25, 2000 to Burrell, et al. for Anti-Microbial Materials. Burrell, et al. deposit an anti-microbial, biocompatible metal by vapor deposition techniques to produce atomic disorder in the coating such that a sustained release of metal ions sufficient to produce an anti-microbial effect is achieved.

3. U.S. No. 5,958,440 issued September 28, 1999 to Burrell, et al. for Anti-Microbial Materials. Burrell, et al. deposit an anti-microbial, biocompatible metal by vapor deposition techniques to produce atomic disorder in the coating such that a sustained release of metal ions sufficient to produce an anti-microbial effect is achieved.

4. U.S. No. 5,939,339 issued August 17, 1999 to Delmore, et al. for an Absorbent Self-Adhering Elastic Bandage. Delmore, et al. discloses a bandage having a self-adhering elastic substrate having a compressive force when extended that provides a therapeutic benefit, and which is flexibly attached or fixed to an absorbent layer.

5. U.S. No. 5,856,245 issued January 5, 1999 to Caldwell, et al. for Articles of Barrier Webs. Caldwell, et al. disclose a fabric that has been treated with a curable shear thinned thixotropic polymer composition.

6. U.S. No. 5,814,094 issued September 29, 1998 to Becker, et al. for an Iontophoretic System for Stimulation of Tissue Healing and Regeneration. Becker, et al. disclose a system including a device and method, a composition, and methods for making the composition in vitro and in vivo. The system is implemented by placing a flexible, silver-containing anode in contact with a wound, placing a cathode on intact skin near the anode, and applying a wound-specific DC voltage between the anode and the cathode.

7. U.S. No. 5,782,788 issued July 21, 1988 to Widemire for a Wound Dressing. Widemire discloses an adhesive pad having an elastic substrate with an elastic layer thereon, a gauze pad affixed to the substrate, and release sheets. A layer of silver foil is affixed to the gauze pad.

8. U.S. No. 5,681,645 issued October 28, 1997 to Strack, et al. for Flat Elastomeric Nonwoven Laminates. Strack, et al. provide a laminate material made from a nonwoven elastomeric web having at least one web of textile material discontinuously adhesively bonded to each side thereof.

9. U.S. No. 5,603,122 issued February 18, 1997 to Kania for a Form-Fit Sock. Kania discloses a form fitting sleeve member having a bias pattern and a contoured form fit. The sleeve may have polymeric cushioning material arranged on its interior surface.

10. U.S. No. 5,478,563 issued December 26, 1995 to Erami for an Antibacterial and Antifungal Polyacetal Resin Composition. Erami discloses compositions that include a polyacetal base resin containing an effective amount of an antibacterial and/or antifungal agent which contains a metal ion selected from among silver, copper and zinc ions.

11. U.S. No. 5,423,874 issued June 13, 1995 to D'Alerta for a Patch for Applying Pain Reducing Electrical Energy to the Body. D'Alerta discloses a device comprising a circuit layer which supports an electronic circuit, a double sided adhesive layer, a top layer which seals the circuit layer from moisture, a backing layer, and a cathode and an anode disposed in apertures of the adhesive layer.

12. U.S. No. 5,413,789 issued May 9, 1995 to Hagiwara, et al. for an Antimicrobial Composition of Aluminosilicate Coated Silica Gel. Hagiwara, et al. disclose a polymer and an antimicrobial composition composed of a coat of aluminosilicate on the surface of the polymer.

13. U.S. No. 5,395,398 issued March 7, 1995 to Rogozinski for Microelectric Apparatus for the Antisepsis, Promulgation of Healing and Analgesia of Wound and Chronic Skin Ulcers. Rogozinski disclose a small, handheld, microelectric, direct current generator with a low frequency modality which is applied directly to a wound site through a composite wound covering or dressing.

14. U.S. No. 5,340,363 issued August 23, 1994 to Fabo for a Wound Dressing. Fabo provides a dressing comprising a porous hydrophobic layer adapted to directly contact the wound during use and an adjacent absorbent layer.

15. U.S. No. 5,326,657 issued July 5, 1994 to Capelli for Antimicrobial Compositions Useful for Medical Applications. Capelli's compositions contain silver

cations complexed by acyclic polyether polymers by formation of a "host-guest relationship" where the acyclic polyether is the "host" and the silver cation is the "guest."

16. U.S. No. 5,297,296 issued March 29, 1994 to Moretz, et al. for a Multi-Layer Moisture Management Elastic Fabric. Moretz, et al. disclose a fabric including a moisture transport fabric layer for wicking moisture away from the skin and a moisture dispersal fabric layer of hydrophilic yarns.

17. U.S. No. 5,218,973 issued June 15, 1993 to Weaver, et al. for a Disposable Wound Treatment Electrode. Weaver, et al. disclose an electrode with an electrically nonconductive cover sheet, an electrically conductive and preferably non-metallic disperser formed at least in part by carbon, a non-adhering wound contact sheet, and a retainer for receiving an electrically conductive skin moisturizer.

18. U.S. No. 5,217,782 issued June 8, 1993 to Moretz, et al. for a Multi-Layer Moisture Management Fabric. Moretz, et al. disclose a fabric with a relatively thick inner moisture permeable hydrophobic fabric layer, a first, relatively thin intermediate hydrophilic fabric layer, and a second, relatively thick outer hydrophilic fabric.

19. U.S. No. 5,210,882 issued May 18, 1993 to Moretz, et al. for an Undergarment with Combination of Loose Fitting Seat, Upper Abdomen and Leg Areas and Supporting Crotch Area. Moretz, et al. disclose an undergarment having a multi-layer crotch with enhanced moisture management capacity and a crotch which includes a pouch for holding a separate moisture absorbing pouch.

20. U.S. No. 5,180,585 issued January 19, 1993 to Jacobson, et al. for Antimicrobial Compositions, Process for Preparing the Same and Use. Jacobson, et al. describe an antimicrobial composition comprising an inorganic particle with a first coating providing antimicrobial properties and a second coating providing a protective function. The first coating is a metal or metal compound selected from the group consisting of silver, silver oxide, silver halides, copper, copper(I) oxide, copper (II) oxide, copper sulfide, zinc oxide, zinc sulfide, zinc silicate and mixtures thereof.

21. U.S. No. 5,094,847 issued March 10, 1992 to Yazaki, et al. for a Method for Producing an Antibacterial Molded Article of Polyolefin Resin Composition Comprising a Zeolite Containing Silver and Subjecting the Surface of the Molded Article to Corona Discharge. Yazaki, et al. describe a method for producing an antibacterial molded article, comprising molding a polyolefin resin composition containing 0.01% by weight or more of

an antibacterial agent (a zeolite containing silver), and thereafter subjecting the surface of the molded article to a corona discharge treatment.

22. U.S. No. 4,938,958 issued July 3, 1990 to Niira, deceased, et al. for an Antibiotic Zeolite. Niira, et al. disclose an antibiotic zeolite prepared by replacing all or part of ion-exchangeable ions in zeolite with ammonium ions and antibiotic metal ions such as silver, copper, zinc, mercury, tin, lead, bismuth, cadmium, chromium and thallium.

23. U.S. No. 4, 938,955 issued July 3, 1990 to Niira, deceased, et al. for an Antibiotic Resin Composition. Niira, et al. disclose an antibiotic zeolite prepared by replacing all or part of the ion-exchangeable ions with ammonium ions and antibiotic metal ions, at least one discoloration inhibitor, and at least one resin.

24. U.S. No. 4,933,178 issued June 12, 1990 to Capelli for a Metal-Based Antimicrobial Coating. Capelli discloses a coating produced by applying a composition comprising an oligodynamic metal salt of a sulfonylurea, a polymeric material, at least one acid compound, and a carrier liquid to at least one body fluid-contacting surface of a medical device.

25. U.S. No. 4,911,688 issued March 27, 1990 to Jones for Fluid Containing Covers - With Electrical Circuits. Jones discloses a clear cover for holding a fluid in contact with a wound. The cover has a flat, thin, flexible ring, an adhesive coating on the underside of the ring, and a raised chamber with nipples.

26. U.S. No. 4,906,466 issued March 6, 1990 to Edwards, et al. for Silver Compound Antimicrobial Compositions. Edwards, et al. deposit an antimicrobial silver compound, preferably silver chloride, on a physiologically inert oxidic synthetic particulate support material (preferably titania) in particulate form.

27. U.S. No. 4,860,737 issued August 29, 1989 to Lang, et al. for a Wound Dressing, Manufacture and Use. Lang, et al. disclose a dressing including a wound facing layer comprising a conformable net of elastomer, an intermediate absorbent layer comprising a conformable open cell foam of hydrophilic polymer, and an outer layer comprising a conformable microporous film.

28. U.S. No. 4,817,594 issued April 4, 1989 to Juhasz for Wound Dressings With Electrically Conductive Layers. Juhasz discloses a wound dressing having a first layer of a permeable material, a later of a semi-permeable material, a layer of an electrically-conductive

material in the form of an open mesh, a layer of charcoal fabric, and a non-adherent wound-facing second layer of a permeable material.

29. U.S. No. 4,808,402 issued February 28, 1989 to Leibovich, et al. for a Method and Compositions for Modulating Neovascularization. Leibovich, et al. disclose methods and TNF (tumor necrosis factor) containing compositions and articles.

30. U.S. No. 4,767,401 issued August 30, 1988 to Seiderman for Iontophoretic Administration of Ionizable or Polar Medicaments to a Mammalian Body. Seiderman discloses a method and articles for iontophoretic administration of systemic ionizable or polar medicaments (denatured or undenatured proteins).

31. U.S. No. 4,753,231 issued June 28, 1988 to Lang, et al. for an Adhesive Wound Dressing. Lang, et al. provide a dressing including a conformable backing layer having an adhesive on one surface and in which at least one of the backing layer and adhesive layer is continuous, and a low wound adherent absorbent pad positioned on the adhesive side of the backing layer.

32. U.S. No. 4,728,323 issued March 1, 1998 to Matson for Antimicrobial Wound Dressings. Matson discloses dressings comprises of a substrate coated with an antimicrobially effective film of a silver salt.

33. U.S. No. 4,703,108 issued October 27, 1987 to Silver, et al. for a Biodegradable Matrix and Methods for Producing Same. Silver, et al. disclose processes for preparing biodegradable collagen-based matrices in sponge or sheet form. A carrier compound may be incorporated during processing.

34. U.S. No. 4,657,006 issued April 13, 1987 to Rawlings, et al. for a Surgical Dressing. Rawlings, et al. disclose a dressing comprising a continuous film of a hydrophilic polymer attached around its edges to a water transmitting film to form a sealed portion into which exudate may pass from an exuding wound.

35. U.S. No. 4,638,796 issued January 27, 1987 to Sims for a Method of Dressing Wounds. Sims discloses applying a surfacing barrier of extruded, nonwoven polymeric material permeable to blood and serum between a wound and a covering dressing.

36. U.S. No. 4,603,152 issued July 29, 1986 to Laurin, et al. for Antimicrobial Compositions. Laurin, et al. disclose compositions comprising an oligodynamic material consisting essentially of compounds of physiological, antimicrobial metals mixed with a

material selected from the group consisting of acrylonitrile-butadiene-styrene copolymer, polyvinyl chloride, mixtures thereof, polyesters, polyurethanes, styrene-block copolymers, natural and synthetic rubbers, polycarbonates, nylon and silicone rubber.

37. U.S. No. 4,525,410 issued June 25, 1985 to Hagiwara, et al. for a Particle-Packed Fiber Article Having Antibacterial Property. Hagiwara, et al. discloses zeolite particles containing metal ions having bactericidal activity, packed and retained in a mixed fiber assembly composed of low-melting thermoplastic synthetic fibers and ordinary fibers.

38. U.S. No. 4,460,369 issued July 17, 1984 to Seymour for an Adhesive-Coated Sheet Material Incorporating Anti-Bacterial Substances. Seymour describes a thin adhesive-coated polymer sheet having an antibacterial material such as silver sulphadiazine disseminated throughout an adhesive layer.

39. U.S. No. 4,376,763 issued March 15, 1983 to Barth, et al. for Functional Agglomerated Speckles, Method for Manufacture Thereof and Dentifrices Containing Such Speckles. Barth, et al. disclose agglomerates of a water insoluble powdered functional material and water insoluble, ethanol soluble ethyl cellulose for dentifrices.

40. U.S. No., 4,340,043 issued July 20, 1982 to Seymour for an Adhesive-Coated Sheet Material Incorporating Anti-Bacterial Substances. Seymour discloses an adhesive-coated liquid-impervious moisture-vapor-permeable polymer sheet with an antibacterial such as silver sulphadiazine disseminated through t the adhesive layer.

41. U.S. No. 4,142,521 issued March 6, 1979 to Konikoff for Electrostatic Soft Tissue Wound Repair Enhancement. Konikoff discloses a bandage arrangement comprising one or more electret elements, in the form of a sterile, disposable self-adhering band-aid like structure, a surgical sponge, or a closely fitting article of clothing.

42. U.S. No. 3,903,882 issued September 9, 1975 to Augurt for a Composite Dressing. Augurt discloses a dressing formed of a knitted fabric of a tissue absorbable polymer, a water vapor permeable elastomeric film, and a natural rubber.

43. U.S. No. 3,830,908 issued August 20, 1974 to Klippel, et al. for Anti-Microbial Compositions Utilizing Allantoin Compounds and Complexes. Klippel, et al. disclose compositions in which micronized allantoin serves as a diluent or carrier for a bactericidal or bacteriostatic ingredient such as silver citro allantoinate, and/or a fungicidal or fungistatic ingredient such as a zinc compound.

44. U.S. No. 3,800,792 issued April 2, 1974 to McKnight, et al. for a Laminated Collagen Film Dressing. McKnight, et al. disclose a dressing made from a layer of a collagen compressed foam film laminated to a thin continuous layer of an inert polymer material such as polyurethane. The dressing preferably contains finely divided silver metal impregnated in the collagen layer.

45. U.S. No. 3,249,109 issued May 3, 1966 to Maeth, et al. for a Topical Dressing. Maeth, et al. show a dressing including a backing member and a flexible adhesive base composed of hydrated gelatin including a small amount of pectin and a medicament or therapeutic agent.

46. U.S. No. 3,092,552 issued June 4, 1963 to Romans for Oligodynamic Silver Compositions and Uses. Romans discloses a composition for therapeutic use or surface-treating compositions, made from silver compounds such as silver nitrate and silver oxide.

47. U.S. No. 2,934,066 issued April 26, 1960 to Stowasser for a Metallized Bandaging Material Especially for the Treatment of Wounds. Stowasser describes a metallized bandaging material made of an absorbent felt-like compacted fiber fleece, wherein the surface of the fibers is covered with a thin metal coating.

The following publications are believed to be relevant to the subject application:

1. R. O. Becker, et al., "Treatment of Orthopaedic Infections With Electrically Generated Silver Ions," J. Bone & Joint Surgery Vol. 60-A, No. 7 (1978), pp. 871-881. Becker, et al. disclose using electrically generated silver ions as adjunctive treatment in the management of chronic osteomyelitis.

2. T. J. Berger, et al., "Antifungal Properties of Electrically Generated Metallic Ions," Antimicrobial Agents & Chemotherapy, Vol. 10, No. 5 (1976), pp. 856-860. Berger, et al. disclose the antifungal action of electrically generated metallic cations (silver).

3. J. A. Spadaro, et al., "Antibacterial Effects of Silver Electrodes With Weak Direct Current," Antimicrobial Agents & Chemotherapy, Vol. 6, No. 5 (1974), pp. 637-642. Spadaro, et al. disclose the antibacterial effects of silver, platinum, gold, stainless steel and copper electrodes with low currents.

No attempt has been made to identify every relevant feature in the documents listed. The attached documents may contain relevant information other than that which caused them

to be selected and may be of interest with respect to one or more features of the applicant's invention(s). Accordingly, the Examiner is urged to review the documents identified and to form his or her own conclusions regarding the relevance thereof.

It is believed that the attached documents do not disclose or make obvious applicant's invention(s). Accordingly, examination of the claims on the merits and allowance of the application are earnestly requested.

Respectfully submitted,

DATE:

Feb. 5, 2002



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Section 10. Identification of Person(s) Making This Information Disclosure Statement

The person making this statement is

(check each applicable item)

- (a) ☐ the inventor(s) who signs below

SIGNATURE OF INVENTOR

(type name of inventor who is signing)

- (b) ☐ an individual associated with the filing and prosecution of this application (37 C.F.R. § 1.56(c))

SIGNATURE OF INVENTOR

(type name of inventor who is signing)

- (c) ☒ the practitioner who signs below on the basis of the information:

(check each applicable item)

- ☒ supplied by the inventor(s).
☐ supplied by an individual associated with the filing and prosecution of this application. (37 C.F.R. § 1.56(c))
☒ in the practitioner's file.

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